APPENDIX E

PACIFIC BELL DIRECTORY
HISTORICAL STATISTICAL DATA
1972 - 1992

PUBLICATION YEAR	NUMBER OF DIFFERENT TITLES PUBLISHED (DIRECTORY AREAS)	NUMBER OF COPIES DISTRIBUTED
1972	70	9,963,550
1973	71	10,097,940
1974	72	10,527,280
1975	72	10,869,826
1976	72	11,173,744
1977	73	12,173,984
1978	73	19,279,803
1979	73	20,225,809
1980	79	21,652,222
1981	80	21,512,889
1982	80	21,174,598
1983	84	22,242,745
1984	89	22,034,022
1985	93	23,749,163
1986	95	23,768,837
1987	102	25,571,585
1988	101	31,559,549
1989	102	35,547,700
1990	104	36,671,889
1991	106	36,070,649
1992	107	35,657,574

PRI

PACIFIC TELESIS GROUP'S

RESPONSE TO THE DRAFT

AFFILIATE INTERESTS AUDIT REPORT

Margaret deB. Brown
130 Kearny Street, Room 3659
San Francisco, CA 94108
Telephone: (415) 394-3550

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PACIFIC TELESIS GROUP'S RESPONSE TO THE DRAFT AFFILIATE INTERESTS AUDIT REPORT

I. INTRODUCTION

The audit[1] of Pacific Telesis Group's affiliate interests lasted 25 months (May 1992 through June, 1994). The auditors sent 80 Data Requests and received 35,000 pages in response (including documents requested). They conducted over 40 interviews and on-site visits. All of this effort produced a Draft Audit Report filled with misinterpretations, outright errors, and broad criticisms, but conspicuously lacking in specifics, such as specific violations of current rules. Indeed, the Draft faults us for following existing rules!

We believe that current rules--particularly the CPUC's New Regulatory Framework, the CPUC's affiliate transaction rules, and the Federal Communications Commission's Part 64 rules--provide multiple layers of protection, so the ratepayer is not harmed by Pacific Bell's transactions with its affiliates. Over the period covered in the audit (roughly 1989 to the present) these rules changed several times; we made every effort to comply with them. We are committed to correcting any mistakes found and to improving our procedures to prevent future mistakes.

Instead of examining traditional affiliate transactions--i.e., purchases and sales between Bell and its affiliates--the auditors concentrated on Bell's enhanced services, research and development, and Yellow Pages. They assert that we erred in developing and tracking the costs of competitive products and services;[2] we strongly disagree. We followed applicable rules regarding cost tracking and business placement. We believe that the costs of new competitive businesses should be placed below-the-line (BTL), rather than above-the-line (ATL), and we have done so as soon as CPUC rules permit.

We are proud of our record on affiliate transactions. We will show in this Response that the criticisms in the Draft are unwarranted or greatly exaggerated.

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[1]The audit was conducted by staff members from the Division of Ratepayer Advocates (DRA) of the California Public Utilities Commission (CPUC). It will be presented to the NARUC Committee on Finance and Technology

[2]Many factual statements are false, as we demonstrate below.

II. OVERALL COMMENTS

A. The Draft's Conclusions Are Based On Audit Standards And Assumptions That Are Inconsistent With CPUC Decisions

The Draft evaluates our conduct using standards and assumptions that contradict CPUC decisions. We describe below some of these mistakes in standards and assumptions. The significant "caveat" in the Draft's introduction should be kept in mind:

> . . . the opinions and conclusions expressed in this report are those of the audit team members and do not necessarily reflect the views, opinions, or policies of the California Public Utilities Commission or any of its Commissioners, the Division of Ratepayer Advocates, or other staff members. (emphasis added)

1. The Draft Wrongly Assumes That Ratepayers Fund Research And Development.

Most of the Draft's conclusions are based on the false assumption that ratepayers "fund" our research, development and deployment (RD&D). For instance, the Draft states:

> When a product or service is recategorized or is abandoned, the total expenditures attributed to the product development are not recomputed. Since the general body of ratepayers funds the RD&D, the expenditures for potentially competitive and competitive services are understated and the costs of development are borne by the ratepayers. (Page B-16, emphasis added)

But under California's incentive regulation, the ratepayers do not fund our RD&D.

On January 1, 1990, the CPUC implemented a New Regulatory Framework-- NRF--for Pacific Bell and GTE California.[3] An important feature of NRF is its price cap mechanism, which separates the prices we are allowed to charge for our services from the costs we incur to produce those services. Under NRF, our rates are adjusted annually based on a formula reflecting changes in the Gross Domestic Product Price Index and a CPUC-established productivity factor. Although this formula adjusts the prices we charge for various services, these adjustments do not reflect changes in our actual costs.[4] No longer can we seek a rate increase because our costs have risen. Since our rates have not reflected actual expenses since 1989, ratepayers did not "fund" the RD&D expenses discussed in the Draft.

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[3] Re Alternative Regulatory Frameworks for Local Exchange Carriers, 33 Cal.P.U.C.2d 43, 212 (1989).

[4] Only cost changes beyond our control which qualify for "Z factor" treatments can affect our rates.

Until June 8, 1994, NRF allowed ratepayers and shareholders to share any earnings between a 13.0% and 16.5% rate of return.[5] Thus, under NRF, the only way ratepayers could be affected by RD&D costs would be if these costs eliminated or reduced sharing. However, the RD&D expenses discussed in the Draft did not affect sharing; our rate of return has been far below 13.0% since 1990, when sharing was established. Even if those RD&D expenses had been excluded from the sharing calculation, we would not have reached the sharing level.[6] Thus, ratepayers were not harmed in any way by our RD&D spending.

2. The Draft Ignores Procedures Adopted By The CPUC To Protect Ratepayers Against Errors in Categorizing RD&D For New Products.

The CPUC's RD&D procedures provide an additional layer of protection for the ratepayer--the rules prevent inappropriate RD&D costs from interfering with the sharing mechanism. The CPUC has required us to provide on-going reports for our new product development activities since 1992, when it issued the 1992 R&D Decision (D.92-07-076). We must provide costs and descriptions of all new product development activity which had cumulative costs (expense and capital) from inception to date over $1 million. Using these reports, the CPUC can later compensate ratepayers for any reduction in sharing that may have occurred because R&D costs for a product were recorded ATL, and the CPUC later categorized the product as BTL. Under NRF, products are put in Category I, II or III depending on the extent to which they are competitive, with the most competitive products placed in Category III.

The 1992 R&D Decision also required us to use Tracking Codes (TCs) to capture costs no later than the Feasibility and Analysis Phase (Step 2) of our 9-Step Product Process. The Draft wrongly asserts that we should use TCs before Step 2, i.e., in the conceptual stage; this would be inappropriate at this early stage and was not required by the 1992 R&D Decision.

Recently, in D.94-06-011 (1994 RD&D Decision), the CPUC created new procedures for preliminary assignment of RD&D costs as ATL or BTL, prior to official categorization of the product. The CPUC made four significant changes to the annual new product RD&D reporting process. First, the CPUC dropped the $1 million threshold (that is, we now must report all new product RD&D).

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[5] D.94-06-011 changed the sharing threshold to an 11.5% rate of return.

[6] The gap between our revenues and the sharing level has been far greater than our RD&D expenses:

1990: $132 million	1992: $165 million
1991: $282 million	1993: $395 million

Sources: Attachment A, Application 93-11-031; April 1, 1994, Annual Shareable Earnings Filing

Second, we will now provide a draft annual report to DRA and meet with DRA to discuss preliminary categorizations. Third, as part of this discussion process, DRA can propose additional new product RD&D activity that it believes should be afforded BTL preliminary treatment. Fourth, if there is disagreement, we will provide BTL treatment to products in dispute, pending official categorization. The 1994 RD&D Decision stated that these new procedures will protect both ratepayers and shareholders. In short, we can now provide earlier BTL treatment because the CPUC has authorized us to do so. Prior to the 1994 RD&D Decision, we could not record new product costs BTL until the products were officially categorized.

The Draft wrongly criticizes our annual RD&D report for including information only for projects with expenditures greater than $1 million (e.g. Draft, p. B-11) and accuses us of "splitting" new product RD&D activity to evade the $1 million threshold. This is untrue; the projects which the auditors reference are not related and should not have been aggregated in our annual reports. Moreover, since the $1 million threshold was eliminated by the 1994 RD&D Decision, we will now report all new product RD&D costs.

The Draft also unfairly criticizes our definition of RD&D (e.g., pp. B-7, B-14). Our definition of RD&D is not limited to experimental or laboratory efforts, as the Draft claims. In addition, the 1994 RD&D Decision eliminates any concern, because it adopted a definition which does not limit RD&D to efforts performed in an experimental or laboratory sense.

The auditors may not have reflected the final 1994 RD&D Decision because it was issued very recently (June 1994). However, the proposed RD&D stipulation that was approved by this decision has been public for months,[7] and the Draft should have referred to it. Now that the changes in our RD&D reporting and new product categorization have been adopted, the Draft's findings are inaccurate and misleading. Moreover, the 1992 R&D Decision is nearly two years old, yet the Draft does not accurately reflect this decision either. The Draft should be corrected to include the safeguards of these decisions.

B. The Draft's "Prudency Review" Approach Would Discourage Innovation.

In its Infrastructure Report, the CPUC stated that "imposing outmoded regulations and unequal burdens on modern telephone companies and their emerging competitors discourages competitive

[7] In fact, we operated under its terms in March, 1994, when we filed our 1993 New Product RD&D Report.

innovation."[8] Instead, the CPUC recommended the promotion of a technology-neutral telecommunications infrastructure policy that will "allow telecommunications providers in California to make their own investment decision, including the type of technology employed."[9] The Draft ignores these directives. Instead, it takes a "prudency review" approach, and claims that many of our RD&D expenditures were imprudent. Yet in 1989 the CPUC explicitly repudiated this approach:

> The incentive-based regulatory framework is likely to perform better than traditional regulation in encouraging appropriate technological advance and full utilization of the local exchange network because the requirement that investments be justified in regulatory proceedings, with a possibility of disallowances through rate reductions, is eliminated. 33 C.P.U.C. 2d at 220, Finding of Fact 106.

C. Our Cost Tracking and Regulatory Accounting Treatment Were Appropriate.

We disagree with the Draft's assertions that we are deficient in tracking, reporting, and providing proper regulatory accounting treatment for RD&D costs. Our cost tracking and regulatory accounting procedures are sound. Minor errors may have occurred, but for the most part we followed all relevant rules. FCC external audits have not found any major discrepancies. Furthermore, as discussed above, NRF assures that any flaws in our procedures will not cause ratepayer harm.

Prior to the 1994 RD&D Decision, all RD&D costs were required to be afforded ATL regulatory treatment (i.e., included in shareable earnings), except in the following situations:

- cancelled enhanced products and services,
- products and services that could not be offered due to denial of a waiver of the Modification of Final Judgment (MFJ), and
- products or services which have been formally categorized as BTL by the CPUC (which does not occur until we bring a product or service to market).

Only in these situations was BTL regulatory treatment required. Thus, contrary to the Draft's assertions that much of our RD&D activity should have been recorded BTL, we correctly booked these activities ATL because these three exceptions did not apply. If, and when, any of the exceptions occur, we will make the necessary BTL booking adjustments in our annual shareable earnings report.

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[8] Enhancing California's Competitive Strength: A Strategy For Telecommunications Infrastructure, California Public Utilities Commission (November 1993), 21-22.

[9] Id. at 52.

Second, our cost tracking processes comply with applicable rules. We use several systems to capture RD&D costs so that future BTL regulatory treatment is possible. The primary identifier or "flag" for new product RD&D cost tracking is the Tracking Code (TC) used in our disbursement accounting process. The internal business use of TCs for new product development tracking purposes is described in our 9-Step Product Process. This Process sets forth the various steps of new product evolution from the conceptual phase through bringing the product to market. Although the auditors assert that we did not always properly use TCs in our Product Process, we believe that our procedures were followed in almost all cases; we corrected all errors that came to light.

Under the FCC's Part 32 Uniform System of Accounts (USOA) definition, we reflect fundamental research and development to USOA Account 6727. 6727 R&D is limited to research and development work and conforms to the definition of Research and Development in Generally Accepted Accounting Principles. If 6727 R&D activity is associated with a specific new product, the 6727 R&D costs are further identified by a discrete TC for that new product. Thus, our accounting system can identify all fundamental R&D costs by Account 6727, and product-specific fundamental R&D within Account 6727 by TC.

The 1992 R&D Decision's definition of costs to be tracked includes non-6727 costs such as deployment costs. We use TCs to capture these product-specific non-6727 RD&D costs. Under USOA rules, these non-6727 costs must be reported to the actual USOA accounts associated with various activities. Our accounting practices comply with this USOA mandate.

We believe that we are following applicable rules, that our regulatory accounting process is accurate, and that we have shown the overall adequacy of our processes in:

- filed testimony (subject to cross-examination) in the 1992 NRF Review proceeding, A.92-05-004;
- annual New Product RD&D reports in 1993 and 1994; and
- specific data request responses in this NARUC audit.

Furthermore, our regulatory accounting process is subject to annual FCC audits by external auditors, who have not reported material problems. The Draft's assertions reflect the auditors' own opinion of how tracking, recording and regulatory reporting of expenses should be done, instead of an analysis of what is actually required under applicable rules.

D. Comprehensive Affiliate Transaction Rules Protect Ratepayers.

The CPUC's comprehensive affiliate transaction rules for Bell provide an added layer of protection for ratepayers. These rules were established in three decisions. First, in January 1986, the CPUC issued D.86-01-026, which required us to charge our affiliates full cost plus a 10% mark-up for any non-tariffed products and services provided to them. Full cost includes overheads, loadings and our authorized rate of return.

In December, 1987, the CPUC adopted additional affiliate transactions rules. In D.87-12-067, the CPUC stated that its new rules would provide sufficient ratepayer protection; additional rules (such as a 5% royalty sought by DRA) were unnecessary. The CPUC explained that its standard was "ratepayer indifference," i.e., the rules should make sure that ratepayers were neither advantaged nor disadvantaged by transactions between Bell and its affiliates. Among the new rules in D.87-12-067 were the following:

- Comprehensive tracking and reporting requirements for affiliate transactions;
- Payment of a fee when an employee is transferred from Bell to an affiliate; the fee is 25% of the employee's annual salary.[10]
- Payment of a 13% referral fee when Bell refers a sale to an affiliate, plus the full cost of the referral process;
- Affiliates must pay the higher of full cost plus 10% or market price for all non-tariffed products and services purchased from Bell;
- Guidelines regarding disclosure of Bell proprietary information and intellectual property to an affiliate were required.

D.87-12-067 was followed by two CPUC audits. First, the DRA conducted the R&D Audit of R&D, joint ventures, and strategic alliances. This audit eventually led to the 1992 R&D Decision, which set new rules for tracking and accounting R&D costs, as discussed above. Second, the DRA and the Commission Advisory and Compliance Division (CACD) audited the effectiveness of the new rules and found no significant problems. The DRA recommended some minor changes; the CACD did not recommend any changes.

[10]To meet DRA's concerns about long-term employee loans, our rules provide that employees can only be loaned for a year; if a loan is over a year, the employee must be transferred. In the case of a loan, full salary, benefits, loadings, and the extra 10% must be paid.

The FCC has also issued affiliate transaction rules (Part 64). FCC audits of compliance with these rules are done annually, and two major compliance audits have been done. No material problems were found in 1989; no problems were reported in 1991.

In 1992, the CPUC issued a decision permitting us to separate the Information Services Group (ISG) from Bell and put it BTL. Among the issues resolved in that decision (D.92-07-072) were the rules for affiliate transactions between ISG (now called Pacific Bell Information Services, or PBIS) and Bell. The CPUC also clarified some of its existing rules that applied to all affiliates, not just PBIS. For transactions between Bell and affiliates, the CPUC adopted Part 64-like rules.

We are proud of our record of compliance with these stringent affiliate transaction rules. The Draft criticizes the rules, rather than our compliance with them; indeed, the Draft says that the rules actually encourage cross-subsidization. The auditors do not explain this curious comment, and we cannot imagine how the current rules could lead to cross-subsidies. Cross-subsidies occur when prices for competitive services are set below cost; the auditors have not identified any occasion where this occurred. The Draft's lack of specificity shows that the auditors were unable to uncover any significant flaws in the rules or in our compliance with them.

E. A Risk/Benefit Analysis Cannot Be Done Until Feasibility Has Been Shown.

The auditors wrongly claim that we should evaluate whether R&D projects will benefit ratepayers prior to starting R&D projects (e.g., p. B-10, item #8). But any such analyses would be at odds with and unnecessary under NRF's ratepayer protections. Also, as explained above, decisions in 1992 and 1994 provide a comprehensive regulatory system for handling new product RD&D. Finally, the auditors' suggestion is unworkable. Benefits of a project cannot be quantified until after basic research has been done and a feasibility is shown. At that point, a business case can be put together. Under our business case guidelines, new products and services are not approved unless they will make a positive revenue contribution (above our cost of capital). No further "risk/benefit analysis" is needed.

III. PERSONAL COMMUNICATIONS SERVICES.

The auditors' discussion of Personal Communications Services (PCS) is rife with factual errors, misconceptions, and half-truths. As a preliminary matter, we note that PCS is a future service that will be offered, by up to six PCS competitors in any given geographic area, after the PCS spectrum auction is held, licenses are issued, and systems are built. The Draft is wrong in referring to PCS as an existing

service.[11] More importantly, the Draft's entire approach to PCS--that this "lucrative" service should be ATL at Bell--is completely at odds with their view that our infrastructure RD&D work should be BTL because it is "competitive"!

A. PCS Work Was Funded By Shareholders.

Contrary to the auditors' repeated misstatements,[12] the bulk of our retail PCS work has been and will be funded by shareholders, not ratepayers. Shareholders funded our largest PCS expenditures to date--over $40 million spent on research at Telesis Technologies Laboratory (TTL). Much smaller amounts were spent at Bell on retail PCS work; inclusion of PCS expenses had no effect on 1990-93 shareable earnings. We filed an Advice Letter on July 1, 1994 to refund about $4.6 million spent at Bellcore on PCS research before 1990 (i.e., pre-NRF).

B. Work At TTL Benefited Both Bell And PacTel.

The Draft is replete with errors about TTL. TTL was not a "joint venture" between Bell and PacTel, but was a Telesis subsidiary set up to do PCS research and trials under FCC experimental licenses. None of these licenses were transferred to PacTel, as the Draft claims. To avoid non-California state tax liability, loaned Bell employees were only used inside California, but Bell received all results from out-of-state work. Indeed, all results of the TTL work were provided to PacTel and Bell and have also been transferred to the new PCS subsidiary, Pacific Bell Mobile Services (Mobile). TTL was complete funded (over $40 million) by Telesis shareholders.

One trial, in San Diego in 1993, was a joint trial with TTL, PacTel and Bell.[13] We informed the DRA and CACD about the trial under our Market Trial Guidelines; CACD approved the trial. A non-disclosure agreement for the trial provided that proprietary Bell information (e.g., AIN information) was not shared with PacTel and vice-versa; only the trial results pertaining to PCS were shared with both Bell and PacTel. The trial provided valuable PCS market information to all participants.

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[11]PCS will be a wireless communications service offered to the public, somewhat similar to cellular service today. We sometimes refer to it as "PCS-Retail". In contrast, PCS-Wholesale (PCS-W) will be a wireless interconnection service offered to wireless carriers, not to the public.

[12]E.g., p. iv, second paragraph and p. B-12, paragraphs 18 and 20.

[13]PacTel contributed the use of its cellular system, which was used to emulate a PCS system; TTL contacted other cellular carriers, but they expressed no interest in a trial. Bell contributed an AIN trial switch but made no other network changes. Bell obtained valuable AIN information from the trial. TTL paid for all other trial expenses.

C. The PCS-Retail Business Will Be Risky And Should Be BTL.

When we first began to study PCS, both Bell and PacTel Corp. were interested in this service, which had not yet been authorized by the FCC. No business placement decision was made at that time. Since then, the FCC has issued several PCS orders; and PacTel Corp. (now known as AirTouch Communications) has been spun off, which makes us eligible for PCS licenses in California. The Draft ignores this history entirely.[14]

The Draft states that retail PCS is "potentially lucrative" and that our decision not to provide this service at Bell "is contrary to the reward follow risk regulatory concept." (p. B-12). The auditors' statements seem to be based on their misconception that ratepayers funded PCS work and their lack of understanding of the extreme risks of PCS-Retail. We believe that PCS-Retail should be offered as a BTL service so that ratepayers are not subject to the risks of a highly competitive business. There will be up to nine competitors offering similar wireless services in most geographic areas: two cellular carriers, one ESMR, and three to six PCS carriers. The costs to obtain PCS licenses at the spectrum auctions and to build the PCS systems are expected to be huge. Throughout the audit, we explained these risks to the auditors.

The subsidiary for PCS-Retail, Mobile, was set up in Telesis on April 21, 1994, and was contributed to Bell on July 1, 1994. All Bell personnel working on retail PCS were transferred to it on July 1, 1994.[15] Mobile owns all results of TTL's PCS work and all of TTL's PCS assets.

D. Bell Will Provide Access to the Telephone Network For All Carriers.

Like cellular carriers today, future wireless providers are likely to need interconnection to the Public Switched Telephone Network (PSTN). Bell has been investigating a new interconnection service for wireless providers; this has been called PCS-Wholesale (PCS-W). Like any new service, PCS-W will involve some risk, but we view Retail PCS as far riskier, since there will be so many competitors. The Draft's statement that our PCS-W work was done to support PacTel[16] is false; PCS-W will be offered to all wireless providers and will benefit Bell.

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[14]Errors about these issues appear at p. iv, second para.; p. B-12, para. 16-20; pp. B-36 and B-37.

[15]In accordance with affiliate transaction rules, 25% of each person's annual salary was paid to Bell as a transfer fee.

[16]P. iv; p. B-12 para. 17; p. B-36; p. B-37.

Moreover, contrary to the Draft's claims,[17] we have not made special modifications to the PSTN to benefit PacTel or PCS providers. We believe that the Advanced Intelligent Network (AIN) will benefit cellular and PCS providers, but this is just one of many potential applications of AIN.[18] PCS can be provided without AIN, just as cellular is today. Our planned retail PCS offering through our new subsidiary will make use of Bell's strengths, possibly including AIN, but it will follow affiliate transaction rules for all services it obtains from Bell.

E. Errors In The PCS Observations.

(i) Bell did not develop PacTel's expertise and was not "underpaid".

When TTL was created, PacTel had been a leader in wireless telephony since 1984. Its wireless R&D organization was solely devoted to wireless research and RF engineering. Limond Grindstaff was selected as project manager for TTL's PCS work because of his expertise and background in PacTel's PCN business in the United Kingdom. Thus the Draft is mistaken in claiming that Bell "expertise" was gained by PacTel. Bell participation in TTL was not "restricted" and Bell received all trial results. Most importantly, Telesis shareholders funded all TTL costs.

Both Bell and PacTel loaned personnel to TTL to do PCS work. When it became clear that this work would take longer than a year, the loans were changed to transfers, in compliance with affiliate transaction rules. The Draft criticizes us for these transfers and states that Bell was "underpaid" because the employees weren't loaned; the Draft ignores the fact that TTL paid the 25% transfer fee for these employees. Bell was fully paid in accordance with the rules.

(ii) Bell's proprietary information was not shared with affiliates

Whenever proprietary information was discussed, Telesis scheduled separate meetings so that PacTel employees did not hear Bell information, and vice-versa.[19] Lists of attendees at meetings or minutes are not required to be maintained, and we cannot be faulted for not doing so. At some meetings, attorneys were present to advise about legal issues. Material pertaining to those issues was attorney-client privileged and was not provided to the auditors. They never challenged our statement that this material was privileged.

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[17] See e.g., p. B-12, para. 19 and p. B-36

[18] See discussion below of AIN. Bell's decision to fund AIN did not assume any contribution to AIN from PCS revenues. AIN spending is not part of PCS (thus, p. B-31 is wrong in grouping them together).

[19] The auditors drew a different conclusion from various interviews, and were later given classified information. they chose to put their error in the text and the correction in footnote 41, p. B-34.

(iii) Bellcore proprietary information was not shared with TTL

Bellcore was hired to assist TTL on one project and TTL paid Bellcore in full for its work. TTL also used other Bellcore information in the public domain. No "pressure" was put on Bellcore to release this information into the public domain.

On p.B-34, the auditors reference Bellcore's UDPCS Framework Advisory (FA). TTL used this FA to plan a UDPCS trial, at Bell's request.[20] At the time, Bellcore had disclosed the FA to industry standards bodies and others; it was not proprietary. The trial was never carried out because no vendor could be found to produce prototype equipment in the necessary time frame.

(iv) Bell's billing to TTL was correct

The Draft complains that Bell's billing to TTL was "unverifiable", yet admits that an internal audit of this billing was done. This audit found some errors, which were corrected. The statement that Pacific Telesis "influences" the percentage of time billed by Bell employees on PCS-related matters is false. The fact that Telesis owns Bell does not mean that Telesis dictates details about how work is conducted at Bell. Use of percentage time reporting based on a sampling process, rather than daily time sheets, is a well-recognized method of tracking time. The auditors' suspicion that "the possibility exists" that Bell was inadequately reimbursed is not supported by any facts.

(v) Bell's business plans were not changed to accommodate PacTel

The original decision to create TTL and fund PCS research using shareholder funds was based on the uncertainties about PCS, since the FCC had just begun its investigation. As several FCC decisions clarified who would be eligible for PCS, the decision to spin off PacTel's wireless businesses was made. With the spin-off, Bell is now eligible for a 30 MHz PCS license. The auditors have completely ignored this aspect of the spin-off.

As planning for the spin-off progressed, and after the FCC had issued its decisions allocating spectrum and setting forth the number of licenses, a Bell group began doing more planning on PCS Retail. This work was not done at TTL because all work at TTL would be shared with PacTel; we were planning for the post-spin environment when we would potentially be directly competing with AirTouch in California.

The auditors have no factual basis for their comments (at p. B-36) that the officers of Telesis who are now at AirTouch exerted any influence to disadvantage Bell in PCS. These speculative comments are completely untrue. Bell network planning was never influenced by PacTel's concerns or

[20]Today, the PCS industry has generally agreed that Bellcore UDPCS is not a promising stand-alone technology

desires; PacTel did not gain any Bell PCS expertise. Bell's concerns and desires to be a PCS provider were not ignored; on the contrary, Telesis funded TTL's PCS work to benefit both Bell and PacTel, and Bell PCS work increased after the spin decision was announced, as explained above.

PCS-W will be a public utility interconnection service. Our PCS-W service concept is consistent with both federal and state regulatory directions. PCS-W work was done at Bell, not TTL. Bell never made special modifications to its network for PacTel. While Bell temporarily deployed an AIN switch, this was not "for PacTel" but was part of the TTL market trial; it was removed after the trial. Contrary to the auditors' criticisms, it would not have been appropriate to do a "demand or risk analysis" before the San Diego trial; the purpose of the trial was to test PCS market demand.

(vi)[21] The effects of the spin-off have been beneficial to Bell's PCS Plans.

Bell's PCS work increased when the spin-off was announced, because it is the spin-off that gave Bell an opportunity to obtain PCS licenses. AirTouch has not been given any "headstart" in the PCS area by its association with Bell. AirTouch's wireless background--not its transactions with Bell--give it an advantage in the PCS industry.

(vii) PCS-Retail and PCS-W should be categorized differently.

It is widely recognized that entry into the PCS retail business will be expensive and very risky. The Bell comments referred to (p. B-37) date from 1990, before recent FCC decisions and legislation permitting spectrum auctions. Furthermore, as previously discussed, PCS retail work was not "relegated" to PacTel but was done at TTL so that both PacTel and Bell could benefit from it. The auditors' statement concerning PCS-W risk ignores the far greater risks of PCS Retail.

(viii) Bellcore work on PCS was handled appropriately.

As previously discussed, we filed an Advice Letter on July 1, 1994 refunding the pre-NRF amounts spent at Bellcore on PCS. Most of the money spent so far on PCS has been at TTL, which was entirely shareholder funded. Moreover, the major PCS expenses will be in the future, to acquire licenses at auction and to build PCS systems. Finally, under NRF, the prudency of our expenditures on either PCS or AIN is irrelevant. Our rates do not vary by our expenditures; our shareholders bear the risks associated with our expenditures.

[21] We have added numbers (vi) through (ix) for consistency, since the headings on pp. B-36 to B-39 seem to be additional PCS "observations".

(ix) Advanced Intelligent Network (AIN) was not justified on the basis of PCS Retail.

The auditors' comments that AIN was justified for PCS-Retail are off the mark. While we believe that AIN may benefit PCS providers, our business plan for AIN does not depend on PCS applications. AIN is a non-competitive platform service.

In 1992, Bell authorized (1) the purchase of an AIN laboratory and a simplex AIN network node and (2) technology tests and market trials on the AIN platform. In October, 1993, Bell approved the placement of an AIN infrastructure to support the deployment of a number of AIN-based services. The first will be Custom Virtual Network, followed by Do Not Disturb Service and then a Wireless Wholesale Interconnect Service to support cellular and PCS service providers. An evaluation of potential benefits will be assessed in separate business cases for each new service. We view infrastructure improvements like AIN as vital to California's future--and we believe most Californians support us. The auditors stand alone in criticizing these investment decisions.

F. Other PCS Issues.

a. One Bell employee who now works on PCS spent three months in Europe on loan to Pacific Telesis International (PTI) in 1990. This loan provided valuable wireless experience to the employee. A few other Bell employees were also loaned to PTI during 1990. In accordance with our affiliate transaction rules, PTI paid all costs associated with these loans, including salaries, benefits, loadings and the required additional 10%.

b. The presentations to the Telesis Policy Group (pages B-26-28) were made in 1990, nearly four years ago. There have been many changes since then (e.g., spectrum auctions have been authorized, the number of PCS licenses is known, the FCC did not set aside any spectrum for LECs, and PacTel is no longer affiliated with Bell). These presentations do not reflect our 1994 views. Similarly, the forecasts (p. B-29) and material on page B-30 are outdated and do not represent our thinking today.

We regard PCS as a potential competitor for wireline services, but not to the extent reflected on page B-30. Furthermore, this summary confuses two concepts: penetration of wireless services and decline in wireline usage. The two are not the same; wireless users do not stop using wireline services.

c. On pages B-27-28, the Draft refers to a document prepared for use in determining the corporate position in the FCC's PCS NOI filing in 1990. As previously noted, much has changed since 1990 and this document does not reflect our current views. For example, our prediction that Local Exchange Carriers like Bell would receive "set-aside" spectrum turned out to be incorrect. Contrary to the auditors' statements, near-term implementation of an enhanced "CT-2" service was recommended

because it would be low-cost, would not require a major spectrum allocation, and would be a good test of PCS demand. Indeed, TTL later tested this concept (the wide-area cordless/consumer PCS trial in 1992-93).

IV. BROADBAND INTEGRATED DIGITAL NETWORK (BISDN) PROJECTS.

A. Introduction

This section of the Draft erroneously concludes (1) that many competitive products benefited from the Broadband Experimental System Testbed (BEST) project, (2) that many of our R&D projects were related and should have been aggregated in our reports of R&D expenditures, and (3) that our tracking procedures and analyses of ratepayer benefits are inadequate. We show below why these conclusions are wrong. In addition, the Draft does not reveal that many of these projects were quite small, involving only minor expenses. Also, the section is filled with factual errors and misleading statements; space does not permit us to address all the flaws, but we highlight key errors.

But there are more fundamental problems with this section. The auditors have ignored the NRF safeguards previously described, which ensure that our spending (absent sharing) will have no impact on our telephone rates. Indeed, the CPUC has explained that the NRF system

> . . .encourages appropriate technological advance and full utilization of the local exchange network. The elimination of the requirement that investments be justified in regulatory proceedings, with the possibility of disallowances through rate reductions, should encourage the local exchange carriers to aggressively pursue new technologies and services which would take fuller advantage of the economies of scale and scope inherent in the local exchange network. (33 CPUC 2d at 151.)

Our spending on the broadband network and other network enhancements is needed to improve the California telecommunications infrastructure and encourage business development here. The auditors' short-sighted carping reveals a basic bias against these needed improvements.

B. Specific Comments

A broadband network will include many technologies; one is Asynchronous Transfer Mode (ATM) technology. Our market trial of ATM Cell Relay Service uses ATM technology, but it is an overstatement to say that Bell will replace its network with ATM (p. B-38).

1. There Is No BEST "Family Of Projects"

The team's statement that "numerous" activities benefit from BEST (p. B-39) is wrong. The only project that benefits from BEST is the Bay Area Gigabit Network (BAGNet) activity. The other projects mentioned in the Draft may involve other broadband technologies, but they are not related to BEST and do not benefit from it. BEST is not a "family of projects" but a single project investigating ATM technology that uses a prototype ATM switch (the EXPANSE switch) transferred from Bellcore.

There were no video applications carried over to BEST from PBERP, as alleged in the Draft, pages B-39-40. Carrying video in the BEST environment would have involved a complete rework of both the hardware and software in the system. Only the idea of carrying video in a broadband network was carried forward into BEST from the PBERP.

BEST did not develop the services and applications mentioned in the third paragraph, p. B-40 These examples are often cited to explain the inherent abilities of ATM to handle different traffic types. Our BEST work has focused on network infrastructure. Some experimental multimedia applications have been built to demonstrate network capabilities, but we do not intend them as end products or services. Although originally the EXPANSE switch was intended to be able to transport HDTV and SMDS traffic, this ability was never added.

2. Errors About Packet Video/Libernet And Video Communications Services (VCS)

Packet Video was not based on the BISDN/ATM network infrastructure. ATM is a cell-switched technology; Packet Video was based on circuit-switched technology, which is completely different. The auditor's statement that Project Libernet "would be most suitable for use with BISDN using ATM" is mere speculation which could be applied to many other potential services. No work has been done to determine the suitability of ATM for this service.

The Draft's statements about VCS are replete with errors; the descriptions of VCS market projections and expectations use phrases taken out of context and restructured to create invalid assumptions. Service concepts that Bell considered but never funded, nor even evaluated, are incorrectly described as "project plans." The strategic alliance with Intel is cited as implementing VCS, when in fact the two projects are unrelated, and are resourced and managed separately.

As explained at the interview on March 17, 1994, VCS is an application-based joint marketing program, not a "product". In the 1989 Business Plan Proposal, the anticipated market evolution of videoconferencing technology was compared to that of television simply to illustrate that the same kinds of technical and cost barriers would need to be overcome to create widespread acceptance of VCS.

We did not imply that VCS would be "analagous to television". The 1989 Proposal also noted that "piggybacking a video-conferencing system on existing network resources is proving to be a successful way of winning user confidence." Consequently, we signed a joint marketing agreement with Compression Labs, Inc. (CLI), enabling us to offer ratepayers a total videoconferencing solution, including both our network services and CLI's videoconferencing equipment.

We have never had a "project plan" consisting of the three phases described on p. B-43. The Application Releases were conceptualized in 1989 as possible ways in which videoconferencing applications might generate network revenues. These were not intended to be phases of a project. Only one of these concepts, Joint Marketed Video Teleconferencing, was developed and marketed as VCS. which includes applications for both dedicated and switched network services. Because the Joint Market Program also encompassed personal videoconferencing, there was no "second phase". (The Intel alliance is not a joint marketing agreement, and we do not market Intel equipment.) We have done no feasibility analysis for the Public Video Teleconferencing Rooms (which the auditors incorrectly call "the third phase,") and we do not plan to offer such a service.

The statistics on p. B-43 are restated Garner Group projections for the entire United States market for video conferencing equipment. Any Bell revenue forecasts would be based on assumptions about network usage in Bell's franchise area, and would be much smaller.

3. Errors About Bay Area Gigabit Network (BAGNet), Switched Multimegabit Data Service (SMDS) And Information Networking Architecture (INA) Field Experiment Project

We have not given BAGNet "a preliminary fully competitive categorization" (p. B-43).

The last paragraph on p. B-44 incorrectly states that SMDS " . . . will require both wideband or broadband access and switching capabilities not currently part of the traditional telephone network." SMDS does require broadband switching capability, but it uses standard access products (i.e., HiCap. 1.544 Mbps and DS3, 45 Mbps) to link SMDS customers to the network. These products were available well before SMDS was introduced.

The 'Description' section, p. B-45, incorrectly states: "Pacific Bell plans to utilize SMDS to provide customer network management capabilities based on SNMP and inter-exchange carrier (IEC) transport for providing national and international connectivity." First, we will not use SMDS to provide customer network management; we will offer SNMP-based customer network management to our SMDS ratepayers as an optional part of the service. Second, we will not provide IEC transport as the auditors state; we have developed SMDS access products for IECs who wish to interconnect with us

and carry customer SMDS traffic beyond the LATA. Many IECs choose not to connect to our SMDS for competitive reasons. They simply obtain direct connections and provide the service themselves.

As we explained to the auditors, we erred in giving INA a preliminary competitive categorization. All INA work has focused on a generic platform architecture to permit open interface between systems and network elements. Since INA is not product-specific, categorization is not appropriate.

4. Errors About Other Minor Projects.

The Draft highlights several minor activities in Bell, such as Project ACORN (PERT). Message Delivery Service (MDS) HDTV Compression, Packet Video, EXPANSE, Libernet, Metrocore and Multimedia Conferencing. These activities were either discontinued or completed and Bell chose not to pursue them. The activities were never close to reaching a product development phase. In most cases, the majority of involvement was by the product manager. These activities had no impact on affiliate transactions and their significance has been overblown by inaccurate or misleading statements in the Draft.

C. The Observations Contain Many Errors.

1. The comments about the BEST project are overstated and misleading, or wrong. BEST is not the same as "broadband". BEST has investigated only ATM technology, one of many technologies needed to build a broadband network. Wireless services like PCS can be offered using a narrow-band network, as cellular is today. An ATM Network may benefit PCS, but BEST has not addressed such benefits. "Numerous projects and new products" will not benefit from BEST; the only project directly related to ATM technology is ATM Cell Relay Service, a Category II tariffed service. In short, BEST will not lead to competitive products.

2. BEST is not an "umbrella project". The quotes in the paragraph are from a preliminary planning document indicating long-term potential for BEST; it is not relevant to today's activities. The focus of BEST has been and remains on the ATM technology itself.

3. BEST is not related to the other projects mentioned by the auditors and is not considered product development.

4. EXPANSE was an applied research project at Bellcore which was independent of our decision to investigate ATM technology. The relationship between EXPANSE and BEST is simply the use of the EXPANSE prototype ATM switch for BEST. PB EXPANSE was a Bellcore project for

transferring the prototype switch to our lab. Contrary to the Draft's statements, the expenses involved were separately accounted for.

The only project leading to BEST at Bell was called "EXPANSE", in 1990 (same name but separate from Bellcore's EXPANSE project). In March, 1992 a mechanized tracking code was assigned; prior to that time, expenditures to BEST were manually tracked to a specific code.

5. It is wrong to say that "all applications for fiber based technology that were considered by Pacific Bell are competitive." Fiber is economically justified in interoffice and some feeder applications which are non-competitive.

6. Contrary to the auditors' criticisms, we thoroughly examined expenditures for network upgrades and justified them on the basis of efficiency and cost-effectiveness. They may also enable us to offer new and upgraded services, and increase our revenues; some services will be competitive and some will not -- e.g., the FCC regards Video Transport as non-competitive. The main driver, however, is efficiency in operations. Under NRF the prudency of these expenditures is not an issue, since rates are independent of costs and we are below sharing. Also, NRF assumes that we will increase our productivity each year; our network upgrades are one way for us to meet NRF productivity goals. Under NRF, it is not appropriate for auditors to second-guess these expenditures.

7. The auditors incorrectly state that "the [SMDS] project was not tracked separately as the project passed from the feasibility, to the R&D, and then to the implementation phase." In fact, SMDS costs were tracked to project code 2JA beginning with the feasibility analysis, in accordance with CPUC rules. There is no requirement to track to phases of product development. An SMDS business case was prepared and approved.

8. In 1991 no "evaluation of ratepayer benefits" was required or possible. The project was not far enough along to perform a cost/benefit analysis (see above, page 8).

9. There is no requirement to separate phases of development. Trial and other product development activities for ABVS were both tracked to the 49R TC, making identification of trial-specific expenses difficult; thus, estimates were given. Total expenditures were tracked. We showed customer benefits in our technology test filing and we justified ABVS by our need to migrate analog video service to digital, to meet customer demands. ABVS is not related to our entry into CATV, broadband, or interLATA service.